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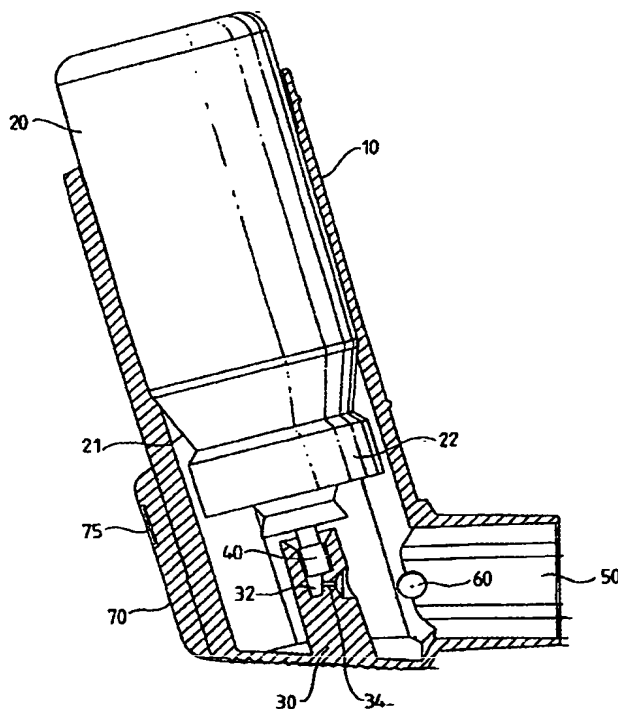
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GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: MEDICAMENT DISPENSER



(57) Abstract: There is provided a medicament dispenser comprising a housing having an outlet (50); a medicament container (20) locatable within said housing (10); an electronic dose counter (70) associated with said outlet; wherein said dose counter (70) comprises a first sensor for directly detecting a medicament release dispensable from said medicament container (20) through said outlet; and means for detecting changes in the performance of the sensor attributable to contamination or degradation and for adjusting the operation of the dispenser to compensate, at least in part, for said changes.

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INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61M15/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 A61M B08B G01F A61B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P	WO 02 36190 A (HARTLEY RICHARD WILLIAM ; JONES ANTHONY PATRICK (GB); GLAXO GROUP L) 10 May 2002 (2002-05-10) cited in the application Whole document	1-5, 10, 30-106
A	US 5 794 612 A (WACHTER ALLAN ET AL) 18 August 1998 (1998-08-18) column 1, line 6 - line 10 column 2, line 9 - line 24 column 3, line 22 - line 24 figure 1	1
-/-		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "a" document member of the same patent family		
Date of the actual completion of the international search 6 November 2003		Date of mailing of the international search report 18. 11. 03
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Borowski, A

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/04402

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>EP 0 689 848 A (COMMISSARIAT ENERGIE ATOMIQUE) 3 January 1996 (1996-01-03)</p> <p>column 5, line 25 - line 45 column 6, line 2 - line 35 claims 1-19; figures 1,2</p>	<p>11, 15-19, 22-27, 30-33, 37,41, 46-48, 90-96, 102-106</p>
Y	<p>DE 199 52 314 A (ABB PATENT GMBH) 17 May 2001 (2001-05-17)</p> <p>Whole document</p>	<p>11, 15-17, 30-33, 37,41, 46-48, 90-96, 102-106</p>
Y	<p>DE 197 48 725 A (FRANK THOMAS DIPL ING ;KURZ TILMANN (DE); MUTH DANIELA (DE); SCHIL) 6 May 1999 (1999-05-06)</p> <p>Whole document</p>	<p>15,16, 18,19, 22-27, 30-33, 37,41, 46-48, 90-96, 102-106</p>

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/04402

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 107
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 107

Claim 107 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter by referring to a drawing (observe Rule 6.2(a) PCT).

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-10, 30-106

Claims 1-10 essentially define a medicament dispenser, comprising: a housing, a medicament container, an electronic dose counter with a sensor and means for detecting changes in the performance of the sensor and for adjusting the operation of the dispenser to compensate for said changes;

2. Claims: 11-14, 30-106

Claims 11-14 essentially define a medicament dispenser, comprising: a housing, a medicament container, an electronic dose counter with a sensor and means for resisting deposition of contaminants;

3. Claims: 15-29, 30-106

Claims 15-29 essentially define a medicament dispenser, comprising: a housing, a medicament container, an electronic dose counter with a sensor and means for removing contaminants;

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/04402

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0236190	A	10-05-2002	AU	2478502 A		15-05-2002
			WO	0236190 A2		10-05-2002
			EP	1330283 A2		30-07-2003
US 5794612	A	18-08-1998	US	6085742 A		11-07-2000
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			EP	0689848 A1		03-01-1996
DE 19952314	A	17-05-2001	US	2002175802 A1		28-11-2002
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